VOLKOVSKIY, P.A., kand.tekhn.nauk

Regulation of the water regime of river bottom lands in the non-Chernozem belt. Nauch. zap. MIIVKH 19:95-133 '58.

(MIRA 15:3)

(Alluvial plains)
(Pastures and meadows)

VOLKOVYSKIY, R.Yu.

Formation of a pair and a photon by a photon in the field of
a nucleus, IAd, fiz. 2 no.5:878-881 N '65.

(MIRA 18:12)

1. Leningradskiy institut inzhenerov zheleznodorozhnogo
transporta im. V.N.Obraztsova.

VOLKOVYSKIY, R.Yu.

Derivation of the formula describing the fine structure from a two-component equation. Izv.vys.ucheb.zav.;fiz. no. 2:69-71 '64.

Angular correlations in forbidden beta-transitions. Ibid.: 71-72   (MIRA 17:6)

1. Leningradskiy institut inzhenerov zheleznodorozhnogo transporta.

VOLKOVYSKIY, R. Yu., Cand Phys-Math Sci -- (diss) "Some problems in the theory of beta-processes." Leningrad, 1960. 5 pp; (Ministry of Education RSFSR, Leningrad State Pedagogical Inst im A. I. Gertsen, Chair of Theoretical Physics and Astronomy); 150 copies; price not given; (KL, 23-60, 121)

VOLKOVYSKIY, R.Yu.

Internal bremsstrahlung in β-decay and nonconservation of space
and time parity. Izv. vys. ucheb. zav.; fiz. no.4:21-27 '59.
(MIRA 13:3)

1.Leningradskiy gosudarstvennyy pedinstitut imeni A.I. Gertsena.
(Beta rays) (Bremsstrahlung)

21(8)
AUTHOR: Volkovyskiy, R. Yu.

SOV/56-35-3-51/61

TITLE: The Circular Polarization of the Internal γ-Bremsstrahlung in a β-Decay and the Invariance With Respect to an Inversion of Time (Krugovaya polyarizatsiya vnutrennego tormoznogo γ-izlucheniya pri β-raspade i invariantnost' pri inversii vremeni)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1958, Vol 35, Nr 3, pp 811 - 812 (USSR)

ABSTRACT: The present paper describes the results obtained by the theoretical investigation of the influence exercised by bremsstrahlung in β-decay in connection with the problems of the conservation of parity with respect to time. A pseudoscalar with respect to an inversion of time can be formed from the momenta of an electron, photon, and neutrino (in which case the recoil of the nucleus must be determined) or from the momenta of an electron and proton and the moment of momentum of the nucleus. The distribution corresponding to the first-mentioned case with respect to the directions of the electron and neutrino, as well as with respect to the energies of the electron and of the γ-quantum is

Card 1/3

The Circular Polarization of the Internal
γ-Bremsstrahlung in a β-Decay and the Invariance
With Respect to an Inversion of Time

explicitly written down and explained. Next, an expression
is written down for the probability of internal bremsstrahlung
in the β-decay of orientated nuclei. The expressions, which
contain imaginary parts of the coupling constants, can also
be determined by investigating the polarization of an electron
in the β-decay of orientated and non-orientated nuclei
(namely, in the same cases as in the usual β-decay). The
results obtained by calculating β-decay with the emission
of a γ-quantum are intended to be published in the "Izvestiya
vysshikh uchebnykh zavedeniy"

Here only the probability of transition to
such a state is given in which the electron has an energy
in the interval dE and the γ-quantum in the interval dk.
Besides, the direction of the momentum $\vec{p}$ of the electron
must be within the solid angle $d\Omega$. The author thanks
S. V. Izmaylov for his constant interest. There are 5
references.

ASSOCIATION: Leningradskiy gosudarstvennyy pedagogicheskiy institut
Card 2/3   (Leningrad State Pedagogical Institute)

ARKHANGEL'SKIY, A.A.; VOLKOVYSKIY, R.Yu.

Sensitivity of the scintillation method in gamma-ray defectoscopy.
Atom. energ. 19 no.3:308-309 S '65.   (MIRA 18:9)

ACCESSION NR: AP4036560

AUTHOR: Volkovy*skiy, R. Yu.

TITLE: Derivation of thin structure formulas from two dimensional equations

SOURCE: IVUZ. Fizika, no. 2, 1964, 69-71

TOPIC TAGS: coulombic field, electron, spherical spinor, boundary condition, degenerate hypergeometric function, Keplerian motion

ABSTRACT: The motion of an electron in a coulombic field has been solved, using the differential equation $\nabla^2 \varphi + \frac{1}{\hbar^2 c^2}\left\{ \left(E + \frac{Ze^2}{r}\right)^2 - E_0^2\right\}\varphi - \frac{iZe^3}{\hbar c}\frac{\sigma r}{r^3}\varphi = 0$, where E_0 - energy of electron at rest. The solution of this equation is given by the linear combination of $\varphi_{jlm} = F(r)\Omega_{jlm} + G(r)\Omega_{jlm}$, $l' = 2j - l$, (where Ω_{jlm} - spherical spinor) for boundary conditions $F \to 0$ and $G \to 0$ at $r \to 0$. Two equations are obtained for the radial functions F and G, which are then shown to be reducible to a nonrelativistic Keplerian form given by $\frac{d^2F}{dr^2} + \frac{2}{r}\frac{dF}{dr} + AF + \frac{2B}{r}F - \frac{\gamma(\gamma+1)}{r^2}F = 0$, whose solution is

Card 1/2

ACCESSION NR: AP4036560

given in terms of degenerate hypergeometric functions. Orig. art. has: 10 formulas.

ASSOCIATION: none

SUBMITTED: 00

SUB CODE: GP

DATE ACQ: 05Jun64

NO REF SOV: 001

ENCL: 00

OTHER: 001

Card 2/2

S/058/61/000/006/012/063
A001/A101

24,6410

AUTHOR: Volkovskiy, R.Yu.

TITLE: Internal γ-brehmsstrahlung at β-decay and invariance at inversion
             of space and time

PERIODICAL: Referativnyy zhurnal, Fizika, no. 6, 1961, 87, abstract 6B315 ("Uch.
             zap. Khabarovskiy gos. ped. in-t. Fiz.-matem. ser.", 1959, no. 1,
             36 - 60)

TEXT: In connection with non-conservation of parity, the author considers
the phenomenon of internal gamma brehmsstrahlung in processes of β-decay and K-
capture. He derives angular correlations between directions of motion of the elec-
tron, γ-quantum, recoil nucleus and polarization of the nucleus in different cases
of radiative β-decay. Polarization of electrons and circular polarization of γ-
quanta at β-decay and K-capture are also studied.

[Abstracter's note: Complete translation]

Card 1/1

$\sqrt{B}$

VOLKOVYSKIY, R.Yu.

Circular polarization of inner γ-bremsstrahlung during
β-decay and invariance during the inversion of time. Zhur.
eksp. i teor. fiz. 35 no.3:811-812 S '58.   (MIRA 12:3)

1.Leningradskiy gosudarstvennyy pedagogicheskiy institut.
            (Nuclear reactions) (Gamma rays) (Beta rays)

L 27861-66   EWT(d)/EWT(m)/EWP(c)/EWP(v)/T/EWP(k)/EWP(1)/ETC(m)   DIAAP WW/DM

ACC NR: AP6C03964   SOURCE CODE: UR/0089/65/019/003/0308/0309

AUTHOR: Arkhangel'skiy, A. A.; Volkovyskiy, R. Yu.

ORG: none

TITLE: Sensitivity of the scintillation method in gamma-ray defectoscopy.

SOURCE: Atomnaya energiya, v. 19, no. 3, 1965, 308-309

TOPIC TAGS: gamma flux, gamma ray, metal test, scintillation, test method, defectoscopy

ABSTRACT: The dependence of the dimension of the minimum detectable defect, Delta X_{min}, on the thickness of the machine part and on the integral gamma flux incident on the machine part is studied, assuming that measurement sensitivity is determined by statistical error - i.e., by fluctuations in the number of gamma quanta - and not by instrument error. A formula is derived for the variation of the sensitivity with the incident integral flux and the machine-part thickness. Results of calculations are compared with those of previous experiments, for the variation of sensitivity with the square root of the inverse source activity and the variation of Delta X_{min} with machine-part thickness, for a ^{60}Co source. Orig. art. has: 2 figures and 8 formulas. /NA/

SUB CODE: 20; 13 / SUBM DATE: 14Sep64 / ORIG REF: 005

Card 1/1   UDC: 620.179.15

PESTRYAKOV, V.B.; ZUYKINA, G.A. [translator]; VOLKOVSKIY, S.A. [translator];
DANILOV, N.A., red.; REZOUKHOVA, A.G., tekhn.red.

[Propagation of radiowaves of low and very low frequencies;
collection of articles] Rasprostranenie dlinnykh i sverkh-
dlinnykh radiovoln; sbornik statei. Moskva, Izd-vo inostr.lit-ry,
1960.   260 p.

(Radiowaves)   (MIRA 13:6)

VOLKOVYSSKIY, S.M., inzhener-mayor

Radio control panel for instructional use. Vest. protivovozd.
obor. no.11:62-63 N '61.

(MIRA 16:10)

(Radiotelegraph)

VOLKOVYSKIY, V.L., inzh.; CHEGOLIN, P.M., kand. tekhn. nauk

Digital summator with independent transfer. Vych. tekh. [MVTU] no.3:218-228 '63.

(MIRA 17:2)

L 50747-65   EWT(d)/EED-2/EWP(1)   Pq-4/Pg-4/Pk-4   IJP(c)   BB/GG

ACCESSION NR: AP5015341   UR/0286/65/000/009/0093/0093
581.142

35
B

AUTHOR: Kessel'man, L. A.; Volkovyskiy, V. L.; Kosov, N. L.

TITLE: Dividing unit. Class 42, No. 170757
16U
SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 9, 1965, 93

TOPIC TAGS: computer component, serial computer

ABSTRACT: This Author's Certificate introduces a dividing unit for a keyboard-operated serial electronic computer. The device contains three dynamic registers on a magnetic drum, a sequential adder and a control unit. The device is designed for simplified construction and high speed operation. The dividend keyboard is connected for serial input of the dividend through an "OR" gate to the recording head of the dynamic register for intermediate remainders. The length of the register is twice the length of a remainder and contains two readout heads. One of the heads corresponds to the midpoint of the register and is connected through a valve to the adder input. The second head corresponds to the end of the register and is connected through another valve and through an "OR" gate to the recording head.

Card 1/2

L 50747-65

ACCESSION NR: AP5015341

The other inputs of the valves are connected to the outputs of the control unit.

ASSOCIATION: none

SUBMITTED: 02Jun63   ENCL: 01   SUB CODE: DP

NO REF SOV: 000   OTHER: 000

Card 2/3

VOLKOVYSSKIY, Ye.O., inzh.

Selecting steam pressure for tubular dryers. Ugol' Ukr. no.6:
17-19 Je '60.   (MIRA 13:7)
          (Briquets (Fuel))   (Drying apparatus)

VOLKOVYSSKIY, Yu. P

KUDRYAVTSEV, Vladimir Nikolayevich, doktor tekhnicheskikh nauk, professor; MARKOV, V.G., kandidat tekhnicheskikh nauk, redaktor; VOLKOVYSSKIY, Yu.R., kandidat tekhnicheskikh nauk, retsenzent; ANTISOV, Y.I., inzhener, redaktor; SIMONOVSKIY, L.Z., redaktor; SOKOLOVA, L.V. tekhnicheskiy redaktor.

[Selecting suitable transmission] Vybor tipov peredach. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroitel'noi lit-ry, 1955. 54 p.
          (Power transmission)   (MLRA 8:10)

VOROB'YEV, S.V.; VOLKOYEDOV, P.S., kandidat tekhnicheskikh nauk; MUDROV, N.A.,
    inzhener.

    Producing profiles of various cross-sections by forging with shaped forg-
    ing blocks. Vest.mash. 33 no.3:28-32 Mr '53.   (MLRA 6:5)
                                                           (Forging)

VOIKOVYSKII, Yefim Grigor'yevich; PERKOV, V.G., otvetstvennyy red.; RYKOV,
N.A., red. izd-va; KOROVENKOVA, Z.A., tekhn. red.

[Heat engineering in coal briquetting plants] Teplovoe khoziaistvo
uglebriketnykh fabrik. Moskva, Ugletekhizdat, 1957. 168 p.
(Briquets (Fuel))   (Heat engineering)   (MIRA 11:10)

VOLKOV-LANNIT, L.

Magnetic tape recorder, the magician of sounds. IUn.tekh.
5 no.7:41-45 Jl '61.   (MIRA 15:1)
(Magnetic recorders and recording)

NAGORSKIY, I.S.; KISLOV, N.V.; VOLKUS, S.P.

Seeking the optimum parameters of rolls for pressing peat dust.
Trudy Inst. torf. AN BSSR 9:153-168 '60.   (MIRA 14:2)
                         (Peat machinery)

NAGORSKIY, I.S., kand.tekhn.nauk; KISLOV, N.V., kand.tekhn.nauk; VOLKUS, S.P.,
inzn.

Air permeability of milled peat. Izv.vys.ucheb.zav.; energ. 8
no.4:83-89 Ap '65.
(MIRA 18:4)

1. Belorusskiy politekhnicheskiy institut. Predstavlena kafedroy
torfyanykh mashin.

VOIKUS, S.P.

Mechanization of the stock taking of milled peat harvested by
UMPY-4 machines. Sbor.nauch.trud.Bel.politekh.inst. no.65:
65-67 '59.   (MIRA 13:5)
                    (Peat)

VOLL, G. RH.,

"Parasitism and Evolution," Usp. sovr. biol., 18, 1, 78-88, 1934

GUBERGRITS, M. Ya.; KUIV, K. A.; VOLL, M. A.

"Thermal properties of shale-kuckersite."

report submitted for 2nd All-Union Conf on Heat & Mass Transfer, Minsk,
4-12 May 1964.

Inst of Chemistry, AS ESSR

VAS, Ivan, okleveles gepeszmernok; VOLLAK, Andor, okleveles kohomernok

State and perspectives of the Hungarian forging industry. Pt.2.
Gep 15 no.12:489-497 D '63.

1. Gepipari Technologiai Intezet, Budapest.

VOLLAK, Andor

Certain questions on the technology of circular forging.
Gepgyartastechn 2 no.11:407-408 N '62.

1. Gepipari Technologiai Intezet.

VAS, Ivan, okleveles gepeszmernok; VOLLAK, Andor, ekleveles kohomernok

State and perspectives of Hungarian blacksmithing. Pt.1.Cep.
15 no.11:452-464   N'63

1. Gepipari Technologiai Intezet, Budapest.

VAS, Ivan, okleveles gepeszmernok; VOLLAK, Andor, okleveles kohomernok

Specialization and concentration in the forging industry. Gep
15 no.3:96-100 Mr '63.

1. Gepipari Technolcgiai Intezet, Budapest.

VOLLAR, Janos, a Voroskereszt Baranya, negyei titkara.

Social support of health services in mines. Nepegeszsegugy 37
no.1:6-12 Jan 56

(MINING
    Red Cross in health & welfare in Hungary (Hun))
(SOCIAL SERVICE
    Red Cross in Hungary in health & welfare serv.
    of miners(Hun))

VOLLARSVICH, M.P.

L 38192-66   EWT(1)/EWT(m)/T/EWP(t)/ETI   IJP(c)   JD/JG
ACC NR: AP6023613   SOURCE CODE: UR/0105/66/000/007/0056/0059

AUTHOR: Volle, V. M.; Grekhov, I. V.; Kryukova, N. N.; Tuchkevich, V. M.;
Chelnokov, V. Ye.; Shuman, V. B.; Yakivchik, N. I.

ORG: Leningrad Physicotechnical Institute im. Ioffe, AN SSSR (Leningradskiy fiziko-
tekhnicheskiy institut, AN SSSR)

TITLE: VKDL-type diffused silicon avalanche power rectifiers

SOURCE: Elektrichestvo, no. 7, 1966, 56-59

TOPIC TAGS: semiconductor rectifier, silicon controlled rectifier

ABSTRACT: The development is reported of new types of diffused silicon power
rectifiers. The rectifiers, which can be operated safely under high peak inverse
voltages, differ from conventional diffused silicon rectifiers in that, due to special
preparation of the p-n junction, the possibility of local electric breakdown at the
intersection of the p-n junction with the surface is eliminated. Therefore, under
peak inverse voltages, the process of avalanche breakdown takes place in the central
section of the junction, while large power is dissipated in the inverse direction.
In 1964, the Leningrad Physicotechnical Institute im. Ioffe, AS USSR, in cooperation
with the "Elektrovypryamitel'" Plant developed a series of such rectifiers bearing the
designations VKDL-100, VKDL-200 and VKDL-350 for 100, 200, and 350 amp, respectively,
and an 800-v operating voltage. The rectifying element of these devices is in the

UDC: 621.382.3

Card 1/3

ACC NR: AP6023613
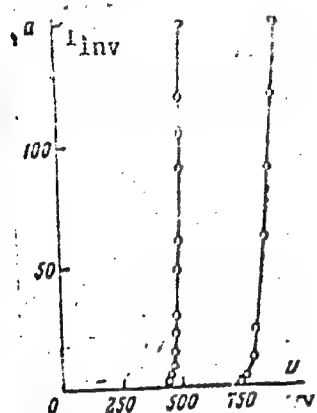
Fig. 1.   Voltage-inverse
current characteristic of
the VKDL rectifiers
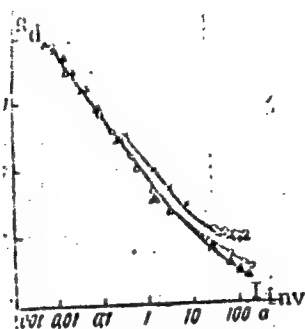
Fig. 2.   Dependence of
the dynamic resistance
of the VKDL rectifiers
on the inverse current
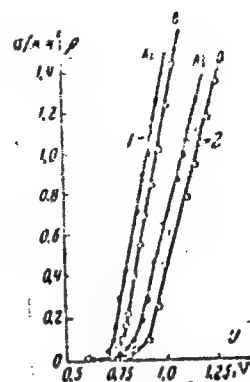
Fig. 3.   Voltage-forward
current characteristic of
p-n junctions

form.   of a 25-mm silicon plate with a p-n-n$^+$ type conductivity. Two thermally
compensating tungsten disks are pressed against the plate. A method of planar guard
ring construction, described elsewhere (Haitz, R. M., A. Goetzberger, R. M. Scarlett,

Card 2/3

L 38192-66

ACC NR: AP6023613

and W. J. Shockley, J. Appl. Phys., v. 34, 1963), was used to eliminate the possi-
bility of surface breakdown. The p-n junctions were made by the method of phosphorus,
boron and aluminum diffusion. The boron p-n junction was 18 mm in diameter with a
planar guard ring 2 mm wide. The thickness in the diffused layer in the central
section of the silicon plate was 60—80 μ, and in the region of the guard ring,
120—160 μ. The thickness of the diffused layer formed by phosphorus on the side of
the base contact was 20 μ. Typical voltage-inverse current characteristics of the rectifiers in the
breakdown region at 500 and 800 v are shown in Fig. 1. The characteristics correspond to
the central p-n junction. The breakdown voltage of the p-n junction in the guard
ring exceeds that of the central p-n junction by 250—600 v depending on the initial
silicon resistance. Dependence of the dynamic resistance of avalanche rectifiers on
inverse current is shown in Fig. 2, and the voltage-forward current characteristic
in Fig. 3. With respect to the forward voltage drop, the above devices are divided
into three groups: those with a 0.4—0.5, 0.5—0.6, and 0.6—0.7 v forward voltage
drop for a nominal current. The inverse current under nominal conditions for all
rectifiers does not exceed 5 ma. The lifetime of the avalanche rectifiers is up to
25,000 hr. The number of thermal cycles ranging from -50 to +140C should not exceed
5000 during the entire lifetime. The rectifiers can be connected either in series or
in parallel. When connected in parallel, they should have equal forward voltage
drops. Orig. art. has: 1 table and 8 figures.   [JR]

SUB CODE: 09/ SUBM DATE: 10May65/ ORIG REF: 003/ OTH REF: 001/ ATD PRESS: _5045_

Card   3/3

Meeting on centrifugal casting in Russia. Vollenbruck.
Die Technik 4, 173(1949). - A condensed report on Russian
practices and results.
                                    M. Hartenheim

A.S.M.-S.L.A. METALLURGICAL LITERATURE CLASSIFICATION

VOLLEN, V.Y.; GORENSHTEYN, L.I.

Transition to centralized factory management. Leg.prom. 17 no.6:17
Je '57.   (MIRA 10:8)

(Factory management)

VOLLENBERGER, A.; GALLE, V.

Stimulating action of ACTH and related polypeptides on the
spontaneous rhythmicity of isolated heart muscle cells in
vitro. Biul. eksp. biol. i med. 56 no.11:18-23 O [i.e. N]
'63.
(MIRA 17:11)

1. Iz otdeleniya issledovaniya krovoobrashcheniya (zav. - prof.
A. Vollenberger) Germanskoy akademii nauk, Berlin-Bukh, Germanskaya
Demokraticheskaya Respublika. Predstavlena deystvitel'nym chlenom
AMN SSSR V.V. Parinym.

VOLLER, G.

Student readers' conference and technical education. Politekh. obuch.
no.5:64 My '58.   (MIRA 11:5)

1.Srednyaya shkola No.117, Odessa.
                    (Technical education)

VOLLER, I.L., inzh.; KAZAKOV, V.L., inzh.

Experience in repairing reinforced concrete structures using in-
jection concrete. Energ. stroi. no.32:86-89 '62.   (MIRA 16:5)

1. Normativno-issledovatel'skaya stantsiya Moskovskogo filiala
Vsesoyuznogo instituta po proyektirovaniyu organizatsiy energe-
ticheskogo stroitel'stva.

VOLLER, J.W.

Putovani Evropop do Rima.   (Chicago, 1956) 309 p. (A trip through Europe
to Rome. illus., ports.)

SO: Monthly Index of East European Accessions (EEAI) LC, Vol. 7, no. 5, May 1958

VOLLERNER, A. (g.Kiyov)

Efficient hearing aid. Radio no.4:48 Ap '61.   (MIRA 14:7)
                        (Hearing aids)

VEKSLER, G.S.; VOLLERNER, N.F.

An electronically controlled carbon-type voltage
stabilizer. Izv. vys. ucheb. zav.; radiotekh.
5 no.3:407-409 My-Je '62.   (MIRA 15:9)

1. Rekomendovano kafedroy radiopriyemnykh ustroystv
Kiyevskogo ordena Lenina politekhnicheskogo instituta.
                  (Voltage regulators)

VOLKOV, Viktor Mikhaylovich, kand. tekhn. nauk; VOLLERNER, N.F.,
doktor tekhn. nauk, prof., retsenzent; POLYANSKAYA, L.O., inzh.,
red. izd-va; STARODUB, T.A., tekhn. red.

[Logarithmic amplifiers]Logarifmicheskie usiliteli. Kiev, Gos-
tekhizdat, USSR, 1962.   243 p.   (MIRA 16:2)
                    (Transistor amplifiers)

VOLLERNER, N.F.

s A

B 66

621.396.615.14 — 82

Oscillator with external amplitude limiter. Vollerner,
N. F. *Radiotekhnika*, 2 (No. 5) 34-41 (1947) *In Russian.* —
A tuned-grid triode oscillator with a diode limiter placed
across the tuned circuit is described. The differential
equations for the two operational modes (diode conduct-
ing and non-conducting) are set out, and the results
discussed and interpreted. The oscillator is mainly
applied where wide frequency coverage constant and out-
put are required.

A. L.

VOLKERNER, N. F.

15

Alternating-Current Arc with Electron-Tube Control for Spectrographic Analysis. (In Russian.) N. F. Volkerner. *Zavodskaya Laboratoriya* (Factory Laboratory), v. 13, Oct. 1947, p. 1215-1217.

Gives circuit details of above installation, which results in greater arc stability and greater ease of adjustment.

METALLURGICAL LITERATURE CLASSIFICATION

VOLLERNER, N. F.

Mar/Apr 1948

Radio
    Radio Broadcasting
    Radio Frequencies

"Influence of Changes in the Frequency Characteristics of Communication Channels on the Peak Level of a Program," N. F. Vollerner, Candidate Tech Sci, 7 pp

"Radiotekh" Vol III, No 2

Conducted study on the changes in the peak levels of musical and vocal programs due to increase in the frequency characteristics in the high audio frequency range and the extension of the band pass limits. Increase of 8 db (16 db for the majority of programs) in the 3- to 4-kc range practically does not change the power required by the receiver to reproduce musical programs.

517T02

FA 6/49T103

USSR/Radio   Jul/Aug 48
        Oscillators, High Frequency

"Frequency Modulation of Band Type RS-Oscillators,"
N. F. Vollerner, Cand Tech Sci, 9 pp

"Radiotekh" Vol III, No 4

Gives circuit diagrams and characteristics of
oscillator, short analysis of author's work, and
results of his experimental tests.

6/49T103

VOLLERNER, N. F.

Vollerner, N. F. "The source of stable voltage," Izvestiya
Kiyevsk. politekhn. in-ta, Vol VIII, 1948 (On cover: 1949),
p. 49-52

SO: U-5241, 17 December 1953, (Letopis 'Zhurnal 'nykh Statey, No. 26, 1949)

VOLLERNER, N. F.

Vollerner, N. F.   "Methods of improving the efficency of radio communications," Izvestiya Kiyevsk, politekhn. in-ta,   Vol VIII, 1948 (on cover: 1949), p. 53-58

SO: U-5241, 17 December 1953, (Letopis 'Zhurnal 'nykh Statey, No. 26, 1949)

VOLLERNER, N. F.

"Apparatus Spectral Analysis".

Kiev Polytechnic Institute

A report delivered at a conference on Electro-acoustics held by the Acoustic Commission, the Acoustic Institute of the Academy of Sciences, USSR, and the Kiev Order of Lenin Polytechnic Inst., from 1-5 July 1955 in Kiev.

SO: Sum 728, 28 Nov 1955

VOLLERNER, N. F.

621.317.761 : 621.317.755

2227.   A METHOD OF INCREASING THE ACCURACY OF FREQUENCY ANALYSERS EMPLOYING CATHODE-RAY TUBE INDICATORS.   N. F. Vollerner.
Radiotekhnika, Vol. 10, No. 12, 51-3 (1955). In Russian.
    If the amplitude-frequency response of a linear quadri-pole is analysed by means of an oscillator whose frequency is modulated by a saw-tooth generator, the output of the quadri-pole being applied to the Y-plates and the saw-tooth waveform to the X-plates, the measurement is not very accurate, since it depends on the modulation characteristic of the oscillator. The accuracy can be increased, if the X-plates are deflected by voltages obtained from a discriminator whose input is also connected to the frequency-sweep oscillator.   R.S.Sidorowicz

SUBJECT	USSR / PHYSICS
AUTHOR	VOLLERNER, N.F.
TITLE	The Selection of the Permissible Deviations of the Parameters of Radio-Technical Assemblies of an Apparatus.
PERIODICAL	Radiotechnika, 11, fasc.11, 62-71 (1956)
	Issued: 12 / 1956

CARD 1 / 2   PA - 1713

The problem of the interchangeability of the elements of the assemblies of a radio apparatus in the case of mass production is dealt with. The radio industry as yet possesses no worked-out system for tolerances in the case of assemblies of radio installations. At present the interchangeability of individual parts and assembly-groups and a normal functioning of the apparatus immediately after assembling is not assured. After being assembled the apparatus must first be got going. The working capacity needed for this purpose may amount to from 30 to 60% of the total working capacity necessary for one product. On the basis of concrete examples general ideas are outlined for those cases in which a putting into operation of the apparatus is necessary after the apparatus has been assembled. Thus it was found in practice that on the occasion of the production of the elements of an oscillatory circuit and of the electric filters, as well as for several types of resistances not consisting of wire and some wire alternating resistances adaption is advisable. On the other hand, no adaption after assembly is necessary on the occasion of the production of transformers and of throttles of high and low frequency. Selection of tolerances depends above all on the working conditions of a building assembly. As a rule defects of individual parts should be about equal, and every construction should be of uniform

Radiotechnika, 11, fasc. 11, 62-71 (1956)   CARD 2 / 2   PA - 1713

accuracy. The tolerances for several typical building assemblies of radio mass
production are in accordance with technical necessity, viz. for output- and
power transformers. Schemes and diagrams are shown from which the influence
exercised by asymmetry on the winding currents may be seen. Another diagram
shows the influence exercised by asymmetry on losses in copper. Next, the in-
fluence exercised by the asymmetry of the winding-halves of a two-half-period
rectifier on the phon-level is investigated. Analysis is carried out on a
kenetron rectifier. The results of these investigations show that, on the
occasion of the computation and construction of kenotron rectifiers, and in the
case of a given permissible accuracy of windings, it is necessary either to
select the rectifying angle accordingly, or, in the case of small rectifying
angles, to select the filter elements in such a manner that the pulsating of
the voltage of the first and not of the second harmonic serves as a basis.

The example mentioned shows that tolerances can be determined by computation,
and that on this basis also the permissible deviations of the number of trans-
former windings can be selected. The tolerances obtained by computation
correspond to those which actually exist in radio-mass production plants.

INSTITUTION:

VOLLERNER,N., doktor tekhnicheskikh nauk

Amplitude radio noise limiters. Radio no.10:54-57 O'55.
(Radio--Interference)   (MIRA 9:1)

VOLLERNER, N.F.

Increasing the noiseproof features of reception by limiting the
envelope derivative. Izv.vys. ucheb. zav.; radiotekh. no.2:157-165
Mr-Ap '58.

(MIRA 11:5)

1. Rekomendovana kafedroy radiopriyemnykh ustroystv Kiyevskogo
ordena Lenina politekhnicheskogo instituta.

(Radiotelephone)   (Noise)

SOV/3713

PHASE I BOOK EXPLOITATION

Vollerner, Naum Filippovich, Doctor of Technical Sciences

Suchasna radioelektronika (Modern Radio Electronics) Kyyiv, 1959.
    43 p. (Series: Tovarystvo dlya poshyrennya politychnykh i
naukovykh znan' Ukrayins'koyi RSR. Ser. 5, No. 17) 23,500 copies
printed.

General Ed.: I.V. Akalovs'kiy, Candidate of Technical Sciences;
    Ed.: A.Ya. Ver.

PURPOSE: This booklet is intended for the general reader.

COVERAGE: The author discusses only the principles of radio elec-
    tronics and the applications of radio electronics in such
    branches of the national economy as radio communications, tele-
    vision, industrial radio electronics, radio navigation, radar
    and radio medicine. No personalities are mentioned. There are
    25 references, all Soviet.

TABLE OF CONTENTS:

    Card 1/2

JP/jb
6-6-60

VOLLERNER, Naum Filippovich; ISLANKINA, T.F., red.; ATROSHCHENKO, L.Ye.,
tekhn.red.

[Radio and electronics in the national economy] Radioelektronika
v narodnom khoziaistve. Moskva, Izd-vo "Znanie," 1960. 44 p.
(Vsesoiuznoe obshchestvo po rasprostraneniiu politicheskikh i
nauchnykh znanii. Ser.4, Nauka i tekhnika, no.20) (MIRA 13:9)
(Electronics)

VOLLERNER, Naum Filippovich; POLYANSKAYA, L.O., red.; SYCHUGOV, V.G.,
tekhn.red.

[Adjustment, regulation, and checking of radio electronic
equipment] Naladka, regulirovka i kontrol' radioelektronnoi
apparatury. Kiev, Gostekhizdat USSR, 1961. 189 p.
(MIRA 15:5)

(Radio--Equipment and supplies)
(Radio--Repairing)

36945
S/142/61/004/006/007/017
E192/E382

6.4400

AUTHORS: Vollerner, N.F., Balitskaya, V.G. and Gatkin, N.G.

TITLE: The problem of reception of pulse signals by the storage method

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiotekhnika, v. 4, no. 6, 1961, 679 - 683

TEXT: Two methods of pulse-storage reception are analyzed from the point of view of the signal-to-noise improvement at the output. It is assumed that storage takes place before the detector and that the filter of the receiver has a rectangular characteristic, whose bandwidth is considerably larger than the optimum. In the first method, a pulse signal $A \sin \omega_0 t$, having a duration δ, is divided into n-portions which, after a delay, are superimposed on each other; the duration of each portion is $\Theta = \delta/n$ and this is a multiple of the number of periods of the carrier frequency f_0 and is not less than the noise correlation interval $1/\Delta f$. The mixture of signal and

Card 1/5

S/142/61/004/006/007/017
E192/E382

The problem of reception ....

noise U_c and U_ω (where U_ω is the noise) is applied to n inputs which are connected in parallel and which are successively opened for a time $\Theta = 6/n$. Each of the inputs is opened after a time interval Θ with regard to the preceding input. Control of the inputs is performed by a special forming device. The pulses of signal and noise having a duration Θ from the input circuits are applied through delay lines to an adding circuit. The signals from the first input circuit are delayed by an interval $(n-1)\Theta$, that of the second circuit by $(n-2)\Theta$ and so on. It is shown that the gain in the signal-noise ratio due to the above system is expressed as:

$$Q_1 = \frac{P_{c1}/P_{\omega1}}{P_{c1}'/P_{\omega1}'} = n^2 \; \frac{\sigma_6^2}{\sigma_\Theta^2} \tag{1}$$

where $n^2 \sigma_\Theta^2$ is the fluctuation noise at the output of the

Card 2/5

The problem of reception ....

S/142/61/004/006/007/017
E192/E382

receiver when the signal and noise are integrated over a
period Θ , and σ_δ^2 is the noise power at the receiver when

integrated over the interval δ . In the second method, which is
analogous to that described in Ref. 1 (M. Shvarts - Voprosy
radiolokatsionnoy tekhniki, 43, no. 1, 1958, 3), the pulse signal
after the filter of the receiver passes through a delay line having
n outputs. The signal is delayed between two neighbouring
outputs by a time $\delta/n = 1\Delta f$, which is equal to the correlation
time of the noise and is a multiple of the period of the carrier
frequency. As in the first methods, the pulse at the input of the
delay line is rectangular and the rise time of the pulse can be
neglected. Again, it is shown that the gain in the signal-noise
ratio, due to the predetector storage, is expressed by Eq. (1).

Card 3/5

The problem of reception ....

It is now necessary to determine the noise powers in Eq. (1).
It is shown that provided the bandwidth is much smaller than
the carrier frequency the noise is expressed as:

(3)

$$\sigma^2 = b^4 \Delta\omega^2 k$$

where b^2 is the noise power per unit bandwidth at the input
of the detector and
k for the case of low signal/noise levels is given by:

$$k = \frac{4}{(\Delta\omega T)^2} (-1{,}577 + \cos\Delta\omega T +$$
$$+ \Delta\omega T \operatorname{Si}\Delta\omega T - \ln \Delta\omega T + \operatorname{Ci}\Delta\omega T). \ (4)$$

(4) .

The quantity T in Eq. (4) denotes the duration of the output
pulse. By employing Eqs. (3) and (4) in conjunction with Eq. (1),

Card 4/5

S/142/61/004/006/007/017

The problem of reception E192/E382

it is found that gains up to 100 are possible. There are 5 figures and 1 table.

ASSOCIATION: Kafedra radiopriyemnykh ustroystv Kiyevskogo
                 ordena Lenina politekhnicheskogo instituta
                 (Department of Radio-receiving Devices of the
                 Kiyev Order of Lenin Polytechnical Institute)

SUBMITTED: November 19, 1960

Card 5/5

VEKSLER, G.S.; VOLLERNER, N.F.

Carbon-type voltage stabiliser. Izv. vys. ucheb. zav.;
elektromekh. 4 no.10:117-119 '61.   (MIRA 14:11)
                    (Voltage regulators)

27413
S/142/62/005/001/008/012
E192/E382

9.6000

AUTHORS: Vollerner, N.F., Gatkin, N.G. and Tereshchuk, R.M.

TITLE: A suitable indicator for a frequency-analyzer

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy,
Radiotekhnika, v. 5, no. 1, 1962, 85 - 90

TEXT: The principal difference between the results obtained from a numerical analysis of a waveform and an experimental processing of the waveform by means of a frequency-analyzer lies in the fact that the results of the former can be used to synthesize the shape of the waveform at the output of a network whose characteristic is known, while this synthesis is impossible by employing the results of the experimental analysis. It is therefore suggested that a frequency-analyzer can be made much more useful if its output filter is followed by three parallel systems which determine the maximum amplitude U_{max}, the root mean square value U_r and the average value U_m ; secondly, the three devices from the following ratios, U_{max}/U_r and U_{max}/U_m . In order to determine whether these

Card 1/2

A suitable indicator ....

S/142/62/005/001/008/012
E192/E382

ratios provide worthwhile information, their values are determined for the following cases:
1) a sinusoidal signal; 2) noise having normal probability density distribution; 3) a periodic train of radio pulses of duration τ and a period T with a rectangular envelope;
4) a periodic train of video pulses having a repetition period T; 5) a mixture of normal noise and a sinusoidal waveform and 6) a mixture of a train of periodic radio pulses and normal noise. It is found that for all the above cases the ratios U_{max}/U_m differ significantly. On the basis of U_{max}, U_r and U_n and their ratios, it is therefore possible to determine not only the frequency components but also the fine structure of the analyzed process. There are 5 figures.

ASSOCIATION: Kafedra radiopriyemnykh ustroystv Kiyevskogo ordena Lenina politekhnicheskogo instituta (Department of Radio-receiving Devices of the Kiyev Order of Lenin Polytechnical Institute)

SUBMITTED: November 19, 1960
Card 2/2

40553

S/142/62/005/003/009/009
E192/E382

9,2540

AUTHORS: Veksler, G.S. and Vollerner, N.F.

TITLE: Electronically-controlled carbon-resistance voltage-
stabilizer

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy,
Radiotekhnika, v. 5, no. 3, 1962, 407-409

TEXT: A voltage-stabilizer based on a carbon-resistance
control element can be improved by introducing an electronic
circuit for the resistance-control instead of the mechanical
system. In this case, the stabilizer is in the form shown in
Fig. 1, where the mains voltage is applied to the load R via
a carbon rheostat R_y. The voltage from across the load is fed
into the rectifier B and then into a bridge circuit consisting
of resistances R_1, R_2, R_3 and a voltage reference tube C_T .
The voltage deviation, which is determined by the deviation of
the output voltage from the nominal, is amplified by the
amplifier YC and the resulting signal is applied to the electro-
magnet ЭМ , which controls the resistance of the carbon element.
Card 1/3

Electronically-controlled ....

S/142/62/005/003/009/009
E192/E382

The operation of the system is analyzed in some detail and it is shown that a stabilization coefficient of 50 can easily be obtained. A similar stabilizer can also be used for direct voltages. The carbon stabilizer is advantageous in comparison with an electron-tube stabilizer in that its efficiency is about one order higher than that of the purely electronic system. There are 5 figures.

ASSOCIATION: Kafedra radiopriyemnykh ustroystv Kiyevskogo
               ordena Lenina politekhnicheskogo instituta
               (Department of Radio-receiving Devices of Kiyev
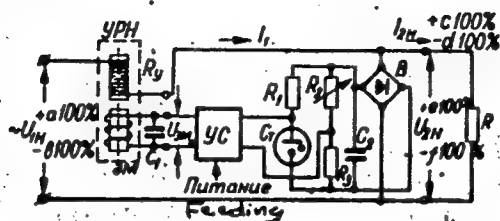   Order of Lenin Polytechnical Institute)

SUBMITTED: June 15, 1961   (initially)
               December 2, 1961 (after revision)

Card 2/3

Electronically-controlled S/142/62/005/003/009/009
E192/E382

Fig. 1:

Card 3/3

S/120/62/000/001/027/061
E140/E463

AUTHORS: Vollerner, N.F., Kriksunov, V.G.

TITLE: Some questions of automation of aperture spectrum
            analysis

PERIODICAL: Pribory i tekhnika eksperimenta, no.1, 1962, 117-122

TEXT: The article consistutes a rather diffuse discussion of the
contradictions involved in a sequential aperture type of spectrum
analyser, where the sampling errors decrease as the sample
duration increases but where the errors due to nonstationarity of
the process increase with sample duration.   The authors.
therefore conclude that the best method is to record the process
on magnetic tape so that it can be subjected to multiple analysis.
The general features of one such instrument are described.
There are 2 figures.

ASSOCIATION: Kiyevskiy politekhnicheskiy institut
             (Kiyev Polytechnical Institute)

SUBMITTED: June 21, 1961

Card 1/1

33786
S/108/62/017/002/001/010
D201/D305

6.9210

AUTHORS: Vollerner, N.F., Gatkin, N.G., and Karnovskiy, M.I.,
Members of the Society (see Association)

TITLE: Interference-killing properties of a receiver produc-
ing a combination of readings of an autocorrelation
function

PERIODICAL: Radiotekhnika, v. 17, no. 2, 1962, 3 - 9

TEXT: The authors show that in a correlation arrangement, in which
the signal $U_{out.s}(T)$ at the output is formed by combined readings
of autocorrelation functions, taken with certain weighting factors
A_i, it is possible to achieve additional improvement in the S/N ra-
tio. The signal at the integrator output in this case has the form

$$U_{out.s}(T) = \sum_{i=0}^{n} A_i \frac{1}{T} \int_0^T U_c(t)U_c(t - \tau_i)dt. \qquad (1)$$

Card 1/5

Interference-killing properties ...

Fig. 1 shows the block diagram of the correlation arrangement accor-
ding to (1). The mixed pulse signal and fluctuating interference,
after the Π-shaped frequency response filter with pass band Δf
$\gg \tau_p$ (where τ_p is the pulse duration) is applied to a multiplier.
The sum of mixed signals, passed through n-changes is applied to
the second input of the amplifier, every channel delays the signal
by time

$$\tau_i = i\tau_1 \qquad i = 0, 1, 2, \ldots, n \qquad (2)$$

$$\tau_1 = \frac{1}{\Delta f} \, \text{.} \qquad (3)$$

where

It is shown that the circuit of Fig. 1 has the output signal accor-
ding to (1) and it is shown that at any $i \neq 0$, as determined by re-
lationships (2) and (3), the dispersion of noise is determined by

$$D\left\{ U_n(t)U_n(t - \tau_i)\right\} \approx \frac{1}{2} D\left\{ U_n^2(t)\right\} \text{.} \qquad (13)$$

the following deduction are also made: The derivation of (13) pro-
ves that the character of power frequency spectra of fluctuations

Card 2/5

Interference-killing properties ...

of the process is $u_n^2(t)$ and $U_n(t)U_n(t - \tau_1)$ is practically the same. It follows that for any i the magnitude of the coefficient k_i, relating the dispersion of noise at the input and output of the integrator, is independent of i and, therefore,

$$k_i = k \tag{20}$$

and that the intensity of power spectrum fluctuation of the process $u_n^2(t)$ is approximately twice that of the process $u_n(t)u_n(t-\tau)$. It follows from (13) and (20) that the signal-to-noise ratio at the output $(S/N)_{out}$ is directly proportional to $\Psi(M_i, m_i)$ as given by

$$\psi(M_i, m_i) = \frac{1 + \sum_{i=1}^{n} M_i m_i}{\sqrt{1 + \frac{1}{2}\sum_{i=1}^{n} M_i^2}}, \tag{23}$$

where $M_i = \frac{A_i}{A_0}$ and $m_i = \frac{\tau_p - i\tau_1}{\tau_p}$ and maximum improvement is obtained

Card 3/5

33786
S/108/62/017/002/001/010
D201/D305

Interference-killing properties ...

for maximum of function Ψ, so that the problem of determining the weighting factors A_i reduces to determining i partial derivatives of $\Psi(M_i, m_i)$ with respect to M_k and equating them to zero which leads to a recurrent expression for the optimum values of weighting factors as given by

$$N_\kappa = \frac{m_\kappa \sum_{i=1, i \neq \kappa}^{n} N_i^2}{\sum_{i=1, i \neq \kappa}^{n} N_i m_i}$$

(30)

where $N_i = A_i / \Lambda_i$. There are 4 figures and 6 references: 5 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: Schwartz. Commun. a. elect., no. 23, 1956.

ASSOCIATION: Nauchno-tekhnicheskoye obshchestvo radiotekhniki i elektrosvyazi im. A.S. Popova (Scientific and Technical Society of Radio Engineering and Electrical Communications imeni A.S. Popov)

Card 4/5

Interference-killing properties ...

33786
S/108/62/017/002/001/010
D201/D305

[Abstractor's note: Name of Association taken from first page of journal]

SUBMITTED: April 28, 1961
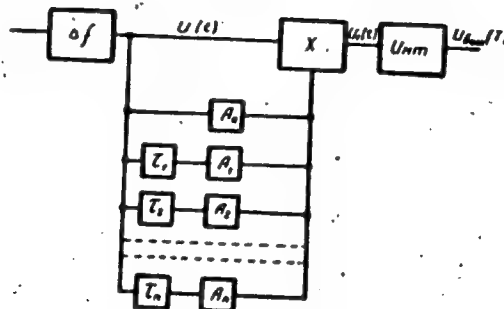
Fig. 1.

Рис. 1

Card 5/5

YAKOVLEV, Vasiliy Nikolayevich, kand. tekhn. nauk; VOLLERNER, N.F.,
doktor tekhn. nauk, retsenzent; POLYANSKAYA, L.O., inzh.,
red.izd-va; MATUSEVICH, S.M., tekhn. red.

[Transistor pulse generators] Impul'snye generatory na tran-
zistorakh. Kiev, Gostekhizdat Ukr.SSR, 1963. 356 p.

(MIRA 16:12)

(Pulse techniques (Electronics))
(Oscillators, Transistor)

VOLLERNER, N.F.

Choice of the optimum dissipation of electric power in the components of radio-electronic apparatus. Izv. vys. ucheb. zav.; radiotekh. 6 no.3:287-291 My-Je '63.   (MIRA 16:9)

1. Rekomendovana kafedroy radiopriyemnykh ustroystv Kiyevskogo ordena Lenina politekhnicheskogo instituta.
                    (Radio--Equipment and supplies)
                    (Electric power supply to apparatus)

ABSTRACT: A case is considered when low-level fluctuating voltages on several
channels are to be combined and measured. Each voltage is amplified, and the
amplifier noise is also assumed fluctuating. Gaussian distribution and similar
spectral characteristics are assumed. The amplifier output voltages are combined
by a transducer and then measured by a permanent-magnet moving-coil instrument.
The mixture of measurand and noise voltages undergoes an "optimum conversion" in
the transducer. A mathematical analysis presented in the article shows that:
(1) in case of entirely uncorrelated measurands, they should be first summed and
then squared; (2) in case of entirely correlated measurands, they should be first
squared and then summed. Orig. art. has: 23 formulas and 1 figure.
Scientific and Technical Society of Radio Engineering and Electrocunnications.

Card 1/1

VOLLERNER, N.F.; KRIKSUNOV, V.G.; TERESHCHUK, R.M.

Some errors of spectrum analyzers with preliminary magnetic
recording. Izv. vys. ucheb. zav.; radiotekh. 7 no.1:81-84
Ja-F'64.   (MIRA 17:5)

L 6397-66   EWT(1)   WR

ACC NR: AP5020928   SOURCE CODE: UR/0142/65/008/003/0360/0362

AUTHOR: Vollerner, N. F. (Prof.); Vasyuk, G. I.; Fuks, L. B.

ORG: none

TITLE: The problem of a probing pulse with a narrow spectrum

SOURCE: IVUZ. Radiotekhnika, v. 8, no. 3, 1965, 360-362

TOPIC TAGS: radar pulse, pulse shape, radar frequency bandwidth

ABSTRACT: To achieve highest velocity resolution (minimum ΔV) in a radar pulse, pulses with the narrowest possible bandwidth are required. The direct relationship between echo-signal attenuation N and limiting ΔV is used in selection of the best pulse shape. Development of quantitative relationships or examination of cases of radical alteration of parameters of the radar other than pulse shape is avoided. Two cases are considered: the first involves discrimination between objects with widely differing echo cross sections (this requires resolution of signal "tails" and therefore normalization of pulses over the full duration of the emission); and the second guarantees high discrimination of a stationary object on a reflective

UDC: 621.391.82

Card 1/2

L 6397-66
ACC NR: AP5020928

background (here normalization over the time interval containing the major portion
of the energy is important, and the length and form of "tails" are secondary). The
rectangular pulse shape has the highest concentration of energy in time at a given
peak power; the sin x/x shape has highest concentration of energy in a bandwidth at
a constant spectral density; the bell shape has in practice the highest possible
concentration of energy simultaneously in time and in a bandwidth. Comparison of
the different pulse shapes for the first case shows superiority of the sin x/x
pulse. In the second case the bell-shaped pulse is best. The rectangular pulse
can be used in the event of low values of N but does not reduce ΔV. The sin x/x
pulse has some advantages for high values of N but is not very promising in a real
noise environment. The bell-shaped pulse is in general the best choice for low ΔV,
but in practice the rectangular pulse is sufficiently effective and requires simpler
apparatus. The rigorous treatment of M. S. Gurevich [Gurevich, M. S., *Spektry ra-
diosignalov*, Svyaz'izdat, 1963] is similar to the first case and indicates the need
for the same type of treatment of the second case. Orig. art. has: 2 figures.

SUB CODE: EC/ SUBM DATE: 05Jun64/ ORIG REF: 007/ OTH REF: 000

Card 2/2

L 6961-66   EWT(1)/EWA(h)

ACC NR: AP502(931   SOURCE CODE: UR/0142/65/008/003/0366/0368

AUTHOR: Vollerner, N. F. (Prof.); Borovskiy, V. P.; Shuvayev, V. A.

ORG: none

TITLE: A generator of video pulses of arbitrary shape

SOURCE: IVUZ. Radiotekhnika, v. 8, no. 3, 1965, 366-368

TOPIC TAGS: pulse shaper, RC circuit, pulse generator

ABSTRACT: In contrast to the complex arbitrary function generators described in
the literature, a comparatively simple scheme for obtaining pulses of arbitrary
shape is described. The method is basically the following: 1) the creation of a
step function of n quantizing pulses of identical duration and amplitudes propor-
tional to the instantaneous values of the function at successive instants; 2) smooth-
ing the step function with a low-frequency filter such as an integrating RC circuit.
A commutator based on cold-cathode thyratrons operating on the principle of a count-
ing circuit is proposed since it is simpler and more reliable than commutators. If

UDC: 621.373.53

Card 1/2

L 6961-66

ACC NR: AP5020931

a symmetrical pulse shaper is desired, the number of commutator cells can be halved.
A generator with a capacity of 64 quantizing pulses is capable of generating func-
tions from 5 microseconds to several seconds in duration. The functions generated
are within 2-3% of the theoretical estimates. The arbitrary function generator
should find wide use in analog computer technology, modeling of systems, and produc-
tion of AM and FM oscillations with arbitrary modulations. Orig. art. has: 4
figures.

SUB CODE: EC/   SUBM DATE: 26Jun64/   ORIG REF: 002/   OTH REF: 001

Card 2/2

L 63713-65   EWT(1)/EEC(b)-2/EWA(h)

ACCESSION NR: AP5014056   UR/0108/65/020/005/0060/0065
                                 621.3.019

AUTHOR: Vollerner, N. F. (Active member)

TITLE: Technically and economically expedient level of reliability

SOURCE: Radiotekhnika, v. 20, no. 5, 1965, 60-65

TOPIC TAGS: system reliability, electronic system reliability

ABSTRACT: Based on the approaches and ideas of E. L. Velker et al. (5th Nat. Symposium, USA, 1960), A. L. Lambert et al. (4th Nat. Symposium, USA, 1959), and D. A. Griffin (IRE Trans., RQC-9, Apr 1960), the optimum reliability of electronic equipment is considered as a result of balancing the first cost and operating expenses against probable loss and damage from failure of equipment to operate. Three transcendent equations are developed for the total equipment cost (10) and the cost with and without reserving (16, 17). These equations, suitable for numerical solution on a computer, permit determining the reliability expedient from engineering and economic viewpoints. Orig. art. has: 20 formulas.

Card 1/2

L 63713-65

ACCESSION NR: AP5014056

ASSOCIATION: Nauchno-tekhnicheskoye obshchestvo radiotekhniki i elektrosvyazi (Scientific and Technical Society of Radio Engineering and Electrocommunication)

SUBMITTED: 17Apr63   ENCL: 00   SUB CODE: DP, EC

NO REF SOV: 005   OTHER: 003

Card 2/2

ACC NR: AP6032919   SOURCE CODE: UR/0142/66/009/003/0310/0315

AUTHOR: Vollerner, N. F. (Professor); Balitskaya, V. G.; Dugin, V. V.

ORG: none

TITLE: Evaluating the echo-signal amplitude with an allowance for a-priori distribution of probability density of the signal levels

SOURCE: IVUZ. Radiotekhnika, v. 9, no. 3, 1966, 310-315

TOPIC TAGS: radar echo, radar detection

ABSTRACT: The amplitude evaluation is made on the basis of mathematical expectation of the amplitude because this method permits finding an unbiased amplitude estimate with minimal mean-square error. Design formulas are derived for estimating the signal amplitude from a known level of the signal-mixed-with-Gaussian-noise envelope for uniform, Raleigh, and more general

UDC: 621.391.16

Card 1/2

ACC NR: AP6032919

a-priori distributions. The curves shown in the article permit determining the confidence intervals of amplitude, with a specified probability and with a known order of magnitude of the ratio of signal dispersion to noise mean-square value; the curves also permit finding approximate estimate of the amplitude, as well as finding the order of error for the case when uniform distribution is assumed instead of real a-priori distribution. Orig. art. has: 6 figures and 22 formulas.

SUB CODE: 17, 09 / SUBM DATE: 22Jun64 / ORIG REF: 002 / OTH REF: 001

CARD 2/2

VOLLERT, R.R.

Well exploitation with sinking centrifugal electric pumps. Neft.
khoz. 43 no.4:66-67 Ap '65.   (MIRA 18:4)

TAMARIN, A.A., kand. tekhn. nauk. Prinimali uchastiye: VOLLEYDT,A.N., mlad. nauchnyy sotr.; POPOVA,N.A., mlad. nauchnyy sotr.; MASLOBOYSHCHIKOV, A.N., inzh.; KUDINOV, A.I.; PIROZHNIKOV, L.B.; SHITOVA, L.N., red. izd-va; SHERSTNEVA, N.V., tekhn. red.

[Instructions for production testing of large prestressed concrete elements]Ukazaniia po proizvodstvennym ispytaniiam krupnorazmernykh predvaritel'no napriazhennykh zhelezobeton-nykh konstruktsii. Moskva, Gosstroiizdat, 1962. 128 p.
(MIRA 15:9)
1. Akademiya stroitel'stva i arkhitektury SSSR. Institut or-ganizatsii, mekhanizatsii i tekhnicheskoy pomoshchi stroitel'stvu.
2. Rukovoditel' gruppy ispytaniy Nauchno-issledovatel'skogo institu-ta organizatsii, mekhanizatsii i tekhnicheskoy pomoshchi stroitel'-stvu Akademii stroitel'stva i arkhitektury SSSR (for Tamarin).
    (Prestressed concrete—Testing)

GUREVICH, Samuil Moiseyevich; VOLLEYDT, L.P., red.; SHPAK, Ye.G.,
tekhn. red.

[Effect of mineral fertilizers on deep Chernozems]Deistvie mi-
neral'nykh udobrenii na moshchnom chernozeme. Moskva, Gos-
khimizdat, 1962. 254 p.   (MIRA 16:2)
(Chernozem soils)   (Fertilizers and manures)

VOLLEYDT, L. P.

Dissertation: "The Influence of Various Forms of Nitrogen Fertilizers on the Yield of
Plants and Their Quality in Relation to Phosphate-Potassium Nutrition."   Cand Agr Sci,
ALL-Union Sci Res Inst of Fertilizers, Agricultural Engineering and Soil Science, Moscow,
1953.   (Referativnyy Zhurnal--Khimiya, Moscow, No 4, Feb 54)

SO: SUM 243, 19 Oct 54

MOSOLOV, I.V., VOLLEYDT, L.P.

Physiological role of sulfur in plants. Dokl. AN SSSR 105 no.5:
1045-1048 D '55.   (MLRA 9:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut udobreniy,
agrotekhniki i agropochvovedeniya. Predstavleno akademikom A.L.
Kursanovym.
            (Plants, Effect of sulfur on)

VOLLEYDT, L P

6263. Physiological rôle of sulphur in plants. I. V. Molosov and L. P. Volleidt. *Dokl. Akad. Nauk, S.S.S.R.*, 1955, 105, 1045—1048; *Referat. Zh. Biol. Khim.*, 1956, Abstr. No. 16613.—Plants of bean, buckwheat, mustard and oats were grown in sand cultures with various concn. of S in the nutrient soln. At the time of ripening of the beans and mustard the main mass of S was conc. in the seeds, with a lesser amount in the stems. In the seeds the main quantity of S was organically combined. During growth the content of inorg. S increased, and that of org. S diminished. On raising the dose of S in the nutrient fluid the content of chlorophyll in the leaves of the plants increased. (Russian) T. R. PARSONS

VOLKEYDT, L.P.

The entry of sulfur into plants by way of roots and foliar treatment. I. V. Mosolov and L. P. Volkeldt. *Udobrenie i Urozhai* 1, No. 8, 13-17(1956); cf. *C.A.* 50, 7161c.— S^{35} fed through the roots of beans in sand cultures and sunflower in soln. cultures enter all plant organs, but in various quantities. The highest amount is found in the young leaves and reproductive organs. In the case of foliar application S^{35} is found also in the roots. The S^{35} moves from the leaves downward and back again upwards. L. S. I.

VOLLEYDT, L.P.

GRACHEV, Dmitriy Grigor'yevich; VOLLEYDT, L.P., redaktor; SHPAK, Ye.G.,
tekhnicheskiy redaktor

[Mineral fertilizers, insecticides, and pungicides; a manual for
fruit and vegetable growers] Mineral'nye udobreniia i iadokhimikaty;
posobie dlia sadovodov i ogorodnikov. Moskva, Gos.nauchno-tekhn.
izd-vo khim.lit-ry, 1957. 86 p.   (MLRA 10:9)
        (Fertilizers and manures) (Insecticides) (Fungicides)

MOSOLOV, I.V.; VOLLEYDT, L.P.

Effect of nutrient ratio on phosphorus metabolism, growth, and yield
of corn. Izv. AN SSSR. Ser. biol. no.2:262-270 Mr-Ap '60.
(MIRA 14:3)

1. The Union Research Institute of Fertilizers and Agropedology.
(CORN (MAIZE)—FERTILIZERS AND MANURES)
(PLANTS, EFFECT OF NITROGEN ON)
(PLANTS, EFFECT OF PHOSPHORUS ON)

SOV/46-5-1-4/24

AUTHORS: Vollerner, N.F. and Karnovskiy, M.I.

TITLE: On Calculation of the Concentration Coefficient of Certain Directive Acoustical Systems (K raschetu koeffitsiyenta kontsentratsii nekotorykh napravlennykh akusticheskikh sistem)

PERIODICAL: Akusticheskiy Zhurnal, 1959, Vol 5, Nr 1, pp 25-30 (USSR)

ABSTRACT: Relationships between the coefficient of axial concentration and the coefficient of pressure amplification of acoustical systems possessing directivity, make it possible to calculate one of these coefficients when the other is known. Such relationships are very useful when direct calculation of one of these coefficients is considerably easier. The authors derive these relationships for axi-symmetrical parabolic and cylindrical concentrators. The paper is entirely theoretical. There are 3 figures and 7 references, 6 of which are Soviet and 1 German.

ASSOCIATION: Kiyevskiy politekhnicheskiy institut (Kiyev Polytechnical Institute)

SUBMITTED: December 10, 1957

Card 1/1